

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(iii) NUMBER OF SEQUENCES: 23

(2) INFORMATION FOR SEQ ID NO:1:

5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6689 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

10

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene

(B) LOCATION: 17p13.1

(D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

1

ggcctcccaa agtgctggat tacaggcgtg agtcaccgcg cctggtcccc tgtcttcttt

61

aagaaagctc agcggacctt ttcccttctt ggggtggaac aaaaagccaa atctagcaca

121

accctgggca ggggcccaga attcaactggaa gcaaaggtagg atggatagg aggcgaggct

181

gcctgtggac cacaggcccg gcccggatgg ctctgatgag aagccggggc gcctaggtca

25

241

ccgccccccac cgtctgcctt tccccccact ctcctggct ggtaaatcc cagagtctca

301

gccgcctaag tgtcttcccc ggaggtgaga ttatctccgc ctgtgctgga cacccctt

361

30

tctcctgcag ccatggatgc cgctctgctc ctgaacgtgg aagggtcaa gaaaaccatt

421

ctgcacgggg gcacgggcga gctcccaaac ttcatcacgg gatcccgagt gagtggggcc

481

cctccggagc agacagggtc ccccacagca gcttcaaca ttccaggtgt gccccaaaggc

541
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721
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781
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6661

ctggagctta gcctgagagg ggttcttgc

6689

(2) INFORMATION FOR SEQ ID NO:2:

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(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1119 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

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(ii) MOLECULE TYPE: cDNA **Baboon**

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene

(B) LOCATION:

(D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

20

atggatgccg ctctgctcct gaacgtggaa ggggtcaaga aaaccattct gcacggaggc acgggcgagc tcccaaactt catcaccggta tcccgagtga tctttcattt ccgcaccatg aaatgtatcg aggagcgcac ggtcatcgac gacagccggc aggtggacca gcccattgcac atcatcatcg ggaacatgtt caagctcgag gtctggaga tcctgctcac ctccatgagg gtgcacgagg tggccgagtt ctggcgcac accatccaca cgggggtcta ccccatcctg tcccgagcc tgcggcagat ggcccagggc aaggacccca cggagtgca cgtgcacaca tgcgggctgg ccaacatgtt cgcctaccac acactggct acgaggacct ggacgagctg cagaaggagc ctcagcctct gatcttgtt atcgagctgc tgcaggttga cgccccgagt

25

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15 (2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA **Dog**

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:

(D) OTHER INFORMATION: produces aryl-hydrocarbon
receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

tgtacggggcaccggcagctccaaacttcctcacgggtccggcatcttcacttccgc
acaacgaaatgcgcacgaggcgccgacagtgtacgcacagcaagcgtgtggccatccatgca
30 catcatcatggaaacatgttcaagctggaggtctggaggtgtgacatccatgcgcgtgg
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catgtttgcctatcacacgctggctacgaggacctggacgagctacagaaggagccgcagcccc
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10 (2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: cDNA **mouse**

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:

20 (D) OTHER INFORMATION: produces aryl-hydrocarbon
receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

atggacgtctctactcctcaatgtggagggtgtcaagaagaccattctgcatggggggacagg
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25 aagaacgcacggtgatcgatgacagcaagcaggtggccagccatgagcatcatcatcgcaac
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(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: bases
- 10 (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA **Rhesus monkey**

(ix) FEATURE:

- 15 (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:
- (D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

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(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA **Squirrel monkey**

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:
- (D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

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AGATGAAGGTGGTGGCGTCCATGGAGAAATAGGCTTCAAGCTGGCCGCTACGAG
GAGGCCTCTTCCAAGTACCAAGGAGGGCCATCATCTGCCTAAGGAACCTGCAGACCAAGGAGAAACC
30 CTGGGAGGTGCAGTGGCTGAAGCTGGAGAAGATGATCAATAACCTGATCCTCAACTACTGTCAGT
GTCTGCTGAAGAAGGAGGAGTACTACGAGGTCTGGAGCATAACCGATGACATTCTCCGGCAC
CCAGGCATTGTGAAGGCCTACTATGTGCGGCCGGCTCACGCGGAGGTGTGGAACCGAGGCCGA
GGCCAAGGCGGACCTCCAGAAAGTGTGGAGCTGGAGGCCGTCCATGCAGAAGGCGGTGCGCAGGG
AGCTGAGGCTGTGGAGAACCGCATGGCGGAGAAGCAGGAGGAGCAGGCTGCCTGCCAAC
ATGCTGAGCCAGGGGGCCACGTGGTCCCCCGGGAGCCACCCGAGAGCCACCTGCAGAGTCATC

cacagagccacccgcagagccacctgcagagccacctgcagagctaacccttgaccccgggcacc
cactacagcactga

5 (2) INFORMATION FOR SEQ ID NO:9:

10 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: DNA (genomic)

15 (ix) FEATURE:

- (A) NAME/KEY: AIPL1 Met79Thr Mutation
- (B) LOCATION: 77...81
- (D) OTHER INFORMATION: Thr 79 mutation

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

acc tcc acg cggtg
Thr

15

25 (2) INFORMATION FOR SEQ ID NO:10:

25 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

30 (ii) MOLECULE TYPE: DNA (genomic)

30 (ix) FEATURE:

- (A) NAME/KEY: AIPL1 Trp88X mutation
- (B) LOCATION: 86...90
- (D) OTHER INFORMATION:

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

gag ttc tga tgc gac
X

15

(2) INFORMATION FOR SEQ ID NO:11:

5 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: DNA (genomic)

15 (ix) FEATURE:

- (A) NAME/KEY: AIPL1 Val96Ile mutation
- (B) LOCATION: 94...98
- (D) OTHER INFORMATION:

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

acg ggg atc tac ccc
Ile

15

15 (2) INFORMATION FOR SEQ ID NO:12:

20 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

25 (ii) MOLECULE TYPE: DNA (genomic)

30 (ix) FEATURE:

- (A) NAME/KEY: AIPL1 Thr124Ile mutation
- (B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

gac ccc ata gag tgg
Ile

15

30 (2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

10

(2) INFORMATION FOR SEO ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Gln163X mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

qat tac tag agg qaq

X

25

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: si

(D) TOPOLOGY: linear

(i) MOLECULE

FEATURE :

Abstract

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(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

gag gag ccc tct tcc

15

5

Lys

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases

10

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Trp278X mutation

15

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

gag gtg tga aat gag

15

20

X

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases

25

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

30

(A) NAME/KEY: AIPL1 IVS2-2A->G mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

tcc cca cgg cac acg

15

- (A) LENGTH: 13 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIP1L1 Pro351del12 mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

g cca ccc aca gca
 del TGCAGAGCCACC

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Cys239Arg mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

tgc cag cgc ctg ctg
Arg

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Ala336del2 mutation
(B) LOCATION:
5 (D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:
t ccc gca gcc acc
del AG

13

10 (2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
15 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Cys42X mutation
(B) LOCATION:
20 (D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:
atg aaa tga gat gag
X

15

25 (2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
30 (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Leu257del9 mutation
(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

gat att cac cca
del CTCCGGCAC

12

5

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Val33ins8 mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

gac tag gtg atc ttg tga tct
ins GTGATCTT

15
20
25
30

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS1-9G->A Benign

Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

CTC AGT GAC TAG

G->A

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

5 (A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

10 (ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS2+66G->C Benign

15 Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

TTT GCC GGG CTG

G->C

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

25 (ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS2-88C->T Benign

30 Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

TCC TCT CAG GAG

C->T

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS2-14G->A Benign

5 Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

ATC CAT TTA TCC

10 G->A

15 (2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

20 (ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

25 (A) NAME/KEY: AIPL1 IVS2-10A->C Benign

30 Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

CGT TTC TCC CCA

A->C

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

5 (ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS3-25T->C Benign

Variants/Polymorphisms

(B) LOCATION:

10 (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

CTG CCC CAC TGA
T->C

15 (2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

20 (ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS3-21T->C Benign

Variants/Polymorphisms

25 (B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

CCT CAC CGA CCT
T->C

30

(2) INFORMATION FOR SEQ ID NO:33:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid

(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:

5 (A) NAME/KEY: AIPL1 IVS5+18G->A Benign

Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

10 AGG AGC GGA CAG
G->A

(2) INFORMATION FOR SEQ ID NO:34:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Asp90His Benign

Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

TGG TGC CAC ACC
His

(2) INFORMATION FOR SEQ ID NO:35:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Phe37Phe Benign
Variants/Polymorphisms

5

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

CAT TTC CGC ACC
Phe

10

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Ser78Ser Benign
Variants/Polymorphisms

15
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25
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(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

ACC TCT ATG CGG

Ser

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Cys89Cys Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:
TGG TGT GAC ACC
Cys

(2) INFORMATION FOR SEQ ID NO:38:

10 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Leu100Leu Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:
ATC CTG TCC CGG
Leu

25 (2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

30 (ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 His172His Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

AAT CAC GAG AAG

5

His

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

10

(B) TYPE: nucleic acid

15

(C) STRANDEDNESS: single

20

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Pro217Pro Benign

Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

AAG CCG TGG GAG

Pro

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:

25

(A) LENGTH: 20 bases

30

(B) TYPE: nucleic acid

35

(C) STRANDEDNESS: single

40

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Asp255Asp Benign

Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:
AGT GAC ATT CTC
Asp

5 (2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
10 (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:
5' -AAGAAAACCATTCTGCACGG-3'

20

(2) INFORMATION FOR SEQ ID NO:43:

20 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
25 (ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:
30 5' -TGCAGCTCGTCCAGGTCT-3'

19

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

5 (ii) MOLECULE TYPE: Primer DNA

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

5'-GACACCTCCCTTCTCC-3'

17

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: Primer DNA (genomic) human

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

5'-GCTGGGGCTGCCTGGCTG-3'

18

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

25 (ii) MOLECULE TYPE: Primer DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:
5'-CCGAGTGATTACCAGAGGGA-3'

5

20

(2) INFORMATION FOR SEQ ID NO:47:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: Primer DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:
5'-TGAGCTCCAGCACCTCATAG-3'

10

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(2) INFORMATION FOR SEQ ID NO:48:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: Primer DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:
5'-ACGCAGAGGTGTGGAATG-3'

20

18

5 (2) INFORMATION FOR SEQ ID NO:49:

10 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: Primer DNA (genomic) human

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

5' -AAAAAGTGACACCACGATC-3'

19

25 (2) INFORMATION FOR SEQ ID NO:50:

30 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 34 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

35 (ii) MOLECULE TYPE: cDNA (genomic) human

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene exon/intron donor splice site

40 (B) LOCATION:

(D) OTHER INFORMATION:

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

CGGATCCCGAgtgagtggggccctccggagcaga

34

50 (2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: cDNA
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene exon/intron Acceptor
5 splice site
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:
cagagtgcaccgtctcggtgactagGTGATCTTTC

35

10

(2) INFORMATION FOR SEQ ID NO:52:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 35 bases
15 (B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene exon/intron Donor splice
20 site
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:
CSACACCATCgttaagttaggcctgcgcgcctgtct

35

25

(2) INFORMATION FOR SEQ ID NO:53:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 35 bases
(B) TYPE: nucleic acid
30 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene exon/intron Acceptor

splice site

(B) LOCATION: 17p13.1

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

gccatccatccgttatccccacagCACACGGGGG

(2) INFORMATION FOR SEQ ID NO:54:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 35 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Donor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

GCTGCTGCAGgtggggctggggttggcagggctgg

(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6689 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Acceptor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

caactgacctgcagctctggggccagGTTGATGCC

35

5 (2) INFORMATION FOR SEQ ID NO:56:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Donor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

GCAGACCAAGgtcagaggccgctggccacggggtg

35

20 (2) INFORMATION FOR SEQ ID NO:57:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

25 (ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Acceptor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

catggctgaccttctccctggcagGAGAAGCCRT

35

(2) INFORMATION FOR SEQ ID NO:58:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 35 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

5 (ii) MOLECULE TYPE: DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene exon/intron Donor splice site
(B) LOCATION:
(D) OTHER INFORMATION:
10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:
CACCACCCAGgtgcgcggggctgcaggggcggaca

35

15 (2) INFORMATION FOR SEQ ID NO:59:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 35 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
20 (ii) MOLECULE TYPE: DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene exon/intron Acceptor splice site
(B) LOCATION:
(D) OTHER INFORMATION:
25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:
gctggatgctccctgctccccacagGCATCGTGAA

35

30 (2) INFORMATION FOR SEQ ID NO:60:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 1 Primer
5 (B) LOCATION: 240
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:
5'-ggacacacctcccttctcc-3'

18

10 (2) INFORMATION FOR SEQ ID NO:61:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
15 (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 1 Primer
(B) LOCATION: 240
(D) OTHER INFORMATION:
20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:
5'-gctggggctgcctggctg-3'

18

65 (2) INFORMATION FOR SEQ ID NO:62:

25 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
30 (ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 2 Primer
(B) LOCATION: 297
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

5'-gggccttgaacagtgtgtct-3'

20

(2) INFORMATION FOR SEQ ID NO:63:

5

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

10

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene Exon 2 Primer
- (B) LOCATION: 297
- (D) OTHER INFORMATION:

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

5'-tttcccgaaacacacagcagc-3'

19

(2) INFORMATION FOR SEQ ID NO:64:

20

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

25

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene Exon 3 Primer
- (B) LOCATION: 364
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

30

5'-agtgaggagcaggattc-3'

18

(2) INFORMATION FOR SEQ ID NO:65:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases

(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
5 (ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 3 Primer
(B) LOCATION: 364
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

10 5'-tgcccatgatgccgcgtgtc-3'

20

(2) INFORMATION FOR SEQ ID NO:66:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18 bases
15 (B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
20 (A) NAME/KEY: AIPL1 gene Exon 4 Primer
(B) LOCATION: 315
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:
5'-tttcgggtctctgatggg-3'

18

25 (2) INFORMATION FOR SEQ ID NO:67:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 17 bases
(B) TYPE: nucleic acid
30 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 4 Primer

(B) LOCATION: 315

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

5' -gcaggctccccagagtc-3'

17

5

(2) INFORMATION FOR SEQ ID NO:68:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 bases

(B) TYPE: nucleic acid

10 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 5 Primer

15 (B) LOCATION: 279

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

5' -gcagctgcctcaggatcatg-3'

19

20

(2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18 bases

(B) TYPE: nucleic acid

25 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 5 Primer

30 (B) LOCATION: 279

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

5' -gtgggggtggaaagaaaag-3'

18

25

30

(2) INFORMATION FOR SEQ ID NO:70:

5 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene Exon 6 Primer
- (B) LOCATION: 497
- (D) OTHER INFORMATION:

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

5'-ctgggaaggaggctgttag-3'

18

20 (2) INFORMATION FOR SEQ ID NO:71:

15 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

25 (ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene Exon 6 Primer
- (B) LOCATION: 497
- (D) OTHER INFORMATION:

30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

5'-aaaagtgacaccacgatcc-3'

19

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 444 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Human Aipl1**

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

5 M D A A L L L N V E G V K K T I L H G G T G E L P N F I T G S R V I F H F R T M K C D E
E R T V I D D S R Q V G Q P M H I I I G N M F K L E V W E I L L T S M R V H E V A E F W C D T I H T G V Y P I L S R
S L R Q M A Q G K D P T E W H V H T C G L A N M F A Y H T L G Y E D L D E L Q K E P Q P L V F V I E L L Q V D A P S
D Y Q R E T W N L S N H E K M K A V P V L H G E G N R L F K L G R Y E E A S S K Y Q E A I I C L R N L Q T K E K P W
E V Q W L K L E K M I N T L I L N Y C Q C L L K K E E Y Y E V L E H T S D I L R H P G I V K A Y Y V R A R A H A E
10 V W N E A E A K A D L Q K V L E L E P S M Q K A V R R E L R L L E N R M A E K Q E E R L X C R N M L S Q G A T Q P
P A E P P T E P P A Q S S T E P P A E P P T A P S A E L S A G P P A E P A T E P P P S P G H S L Q H

(2) INFORMATION FOR SEQ ID NO:73:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Chimpanzee Aipl1**

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

20 M D A A L L L N V E G V K K T I L H G G T G E L P N F I T G S R V I F H F R T M K C D E E R T V I D D S R Q V G Q P M H I I I G N
15 M F K L E V W E I L L T S M R V H E V A E F W C D T I H T G V Y P I L S R S L R Q M A Q G K D P T E W H V H T C G L A N M F A Y H
T L G Y E D L D E L Q K E P Q P L V F V I E L L Q V D A P S D Y Q R E T W N L S N H E K M K A V P V L H G E G N R L F K L G R Y E
E A S S K Y Q E A I I C L R N L Q T K E K P W E V Q W L K L E K M I N T L I L N Y C Q C L L K K E E Y Y E V L E H T S D I L R H H
P G I V K A Y Y V R A R A H A E V W N E A E A K A D L R K V L E L E P S M Q K A V R R E L R L L E N R M A E K Q E E R L C R N
25 M L S Q G A T Q P P A E P P T E P P A Q S S T E P P A E P P P A P S A E L S A G P P A E T A T E P P P S P G H S L Q H

30

(2) INFORMATION FOR SEQ ID NO:74:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: protein
(ix) FEATURE:
(A) NAME/KEY: **Baboon** Aipl1
5 (B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

MDAALLLNVEGVKKTILHGGTGEPLPNFITGSRVIFHFRMCKDEERTVIDDSRQVDQPMHIIIGN
MFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTEWHVHTGLANMFAYH
10 TLGYEDLDELQKEPQPLIFVIELLQVDAPS DYQRETWNLSNHEKMKVVPVLHGEGNRLFKLGRYE
EASSKYQEAIICLRLNLQTKEKPWEVQWLKLEKMINTLTLNYCQCLLKKEEYYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLQKVLEEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATQPPTTEPPAEPHTAPPAELSTGPPAEPPLSPGHSLQH

15 (2) INFORMATION FOR SEQ ID NO:75:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 444 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
20 (ii) MOLECULE TYPE: protein
(ix) FEATURE:
(A) NAME/KEY: **Cow** Aipl1
(B) LOCATION:
(D) OTHER INFORMATION:
25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

MDATLLLNV EGIKKTILHGGTGDLPN FITGARVTFHFRMCKDEERTVIDDSKQVGHPMIIIGN
MFKLEVWEILLTSMRVSEVAEFWCDTIHTGVYPILSRSLRQMAEGKDPTEWHVHTGLANMFAYH
TLGYEDLDELQKEPQPLIFIELLQVEAPSQYQRETWNLNQEKMQAVPILHGEGNRLFKLGRYE
EASNKYQEAIIVCLRLNLQTKEKPWEVQWLKLEKMINTLILNYCQCLLKKEEYYEVLEHTSDILRHH
30 PGIVKAYYVRARAHAEVWNEAEAKADLEKVLEEPSMRKAVQRELRLLENLEEKREEERLRCRN
MLG

(2) INFORMATION FOR SEQ ID NO:76:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 444 amino acids

(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: protein
(ix) FEATURE:

5 (A) NAME/KEY: **Mouse Aipl1**

(B) LOCATION:
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

MDVSLLLNVEGVKKTILHGGTGELPNFITGSRVTFHFRTMKCDEERTVIDDSKQVGQPMSIIIGN
10 MFKLEVWETLLTSMRLGEVAEFWCDTIHTGVYPMLSRSRSLRQVAEGKDPTSWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLVFLYELLQVEAPNEYQRETWNLNNEERMQAVPLLHGEGNRLYKLGRYD
QAATKYQEAIVCLRNLQTKEKPWEVEWLKLEKMINTLILNYCQCLLKKEEYYEVLEHTSDILRHH
PGIVKAYYMRARAHAEVWNAEEAKADLEKVLELEPSMRKAVLRELRLLESRLADKQEEERQRCRS
MLG

15

(2) INFORMATION FOR SEQ ID NO:77:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 444 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: protein
(ix) FEATURE:
(A) NAME/KEY: **Rhesus Monkey Aipl1**
(B) LOCATION:
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDEERTVIDDSRQVDQPMHIIIGN
MFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTEWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLIFVIELLQVDAPS DYQRETWNLSNHEKMKVVPVLHGEGNRLFKLGRYE
20 EASSKYQEAIIICLRNLQTKEKPWEVQWLKLEKMINTLTLNYCQCLLKKEEYYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLQKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATQPPAEPQAQPPTAPPaelSTGPPADPPAEPPTAPPaelSTGPPAEPPLSPGHSLQH

25 (2) INFORMATION FOR SEQ ID NO:78:

5 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 444 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (A) NAME/KEY: **Squirrel Monkey** Aipl1

- (B) LOCATION:

- (D) OTHER INFORMATION:

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDEERTVIDDSREVGQPMHIIIGN
MFKLEVWEILLTSMRVREVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTEWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLIFVIELLQVDAPSDYQRETWNLSNHEKMKVVPVLHGEGNRLFKLGRYE
EASSKYQEAIICLRNLQTKEKPWEVQWLKLEKMINTLILNYCQCLLKKEEYYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLQKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATWSPAEPPEPPAESSTEPPAEPPEPPAELTLTPGHPLQH